

IN THE CLAIMS:

1-3. (cancelled)

4. (currently amended) A method of manipulating neuronal ion channels, comprising: transfecting a fast-spiking neuronal cell that expresses an mRNA encoding a Kv3.4 protein with a vector encoding an siRNA directed against an said mRNA encoding a Kv3.4 protein, wherein said siRNA targets positions 2222-2283 of a Kv3.4 nucleic acid described by GenBank accession number X62841, and wherein said siRNA is capable of inhibiting Kv3.4 expression in said cell, and wherein said cell is located in vitro or ex vivo.

5-9. (cancelled)

10. (currently amended) The method of claim [[7]]4, further comprising the step of transplanting said cell into a subject.

11-16. (cancelled).

17. (new) The method of claim 4, wherein said siRNA is directed toward a Kv3.4 target selected from the group consisting of SEQ ID NOs: 3 and 4.